

## Document Number 2

Entry 2 of 3

File: DERWENT

September 21, 1999

DERWENT-ACC-NO: 1996-098631

DERWENT-WEEK: 199849

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## TITLE:

Fibre structure for mfr. of yarns, fabrics and carpets - comprising linear low density polyethylene and other fibres, has improved dimensional stability, abrasion resistance and wear properties

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PATENT-ASSIGNEE: HERCULES INC[HERC]

PRIORITY-DATA: 1994US-0287973 (August 9, 1994) , 1996US-0642837 (May 3, 1996) , 1996US-0642839 (May 3, 1996)

## PATENT-FAMILY:

| PUB-NO        | PUB-DATE          | LANGUAGE | PAGES | MAIN-IPC    |
|---------------|-------------------|----------|-------|-------------|
| US 5824613 A  | October 20, 1998  | N/A      | 000   | D03D 003/00 |
| EP 696654 A1  | February 14, 1996 | E        | 007   | D01F 006/30 |
| JP 08060510 A | March 5, 1996     | N/A      | 006   | D04H 001/54 |
| CA 2155404 A  | February 10, 1996 | N/A      | 000   | D01F 006/04 |
| CN 1123854 A  | June 5, 1996      | N/A      | 000   | D04H 005/00 |
| US 5698480 A  | December 16, 1997 | N/A      | 005   | D02G 003/00 |
| US 5712209 A  | January 27, 1998  | N/A      | 006   | D03D 003/00 |

DESIGNATED-STATES: BE CH DE DK FR GB IT LI

CITED-DOCUMENTS: 01Jnl.Ref; EP 154197; JP05071060; US 5077874; US 5199141; WO 9110768; WO 9412699; WO 9425647; WO 9425648

## APPLICATION-DATA:

| AFFIICATION-DATA | ••              |                |                |
|------------------|-----------------|----------------|----------------|
| PUB-NO           | APPL-DESCRIPTOR | APPL-NO        | APPL-DATE      |
| US 5824613A      | Div ex          | 1994US-0287973 | August 9, 1994 |
| US 5824613A      | N/A             | 1996US-0642839 | May 3, 1996    |
| EP 696654A1      | N/A             | 1995EP-0305497 | August 7, 1995 |
| JP08060510A      | N/A             | 1995JP-0202582 | August 8, 1995 |
| CA 2155404A      | N/A             | 1995CA-2155404 | August 3, 1995 |
| CN 1123854A      | N/A             | 1995CN-0116322 | August 9, 1995 |
| US 5698480A      | N/A             | 1994US-0287973 | August 9, 1994 |
| US 5712209A      | Div ex          | 1994US-0287973 | August 9, 1994 |
| US 5712209A      | N/A             | 1996US-0642837 | May 3, 1996    |
|                  |                 |                |                |

IPC: B32B005/24; B32B007/00; D01F006/04; D01F006/30; D02G003/00;

D02G003/04; D02G003/40; D03D003/00; D03D015/00; D04H001/42; D04H001/54; D04H005/00

ABSTRACTED-PUB-NO:EP 696654A

BASIC-ABSTRACT: Fibre (I) comprises 80 wt.% or more LLDPE having a m.pt. under 109deg.C. Also claimed are a fibre structure and a thermally consolidated fibre structure. PREFERRED ALERT - The fibre structure comprises (I) and other fibres, in the form of a multifilament yarn woven textile fabric, knitted textile fabric, tufted textile fabric, nonwoven textile fabric or carpet. The thermally consolidated fibre structure comprises (1) 3 wt.%, wrt. total wt. of the structure of lower melting fibres comprising 80 wt.% LLDPE, and (2) 97 wt.% or less wrt. total wt. of the structure, of non-melting fibres or fibres (I) having a m.pt. higher than the LLDPE fibres. The difference in m.pt. between the fibres is 10 deg.C or more. USE - For the mfr. of yarns, (non)woven fabrics, carpets and laminates. ADVANTAGE - Improved dimensional stability, abrasion resistance and wear properties.

ABSTRACTED-PUB-NO:US 5698480A

EQUIVALENT-ABSTRACT: Fibre (I) comprises 80 wt.% or more LLDPE having a m.pt. under 109 deg. C. Also claimed are a fibre structure and a thermally consolidated fibre structure. PREFERRED ALERT - The fibre structure comprises (I) and other fibres, in the form of a multifilament yarn woven textile fabric, knitted textile fabric, tufted textile fabric, nonwoven textile fabric or carpet. The thermally consolidated fibre structure comprises (1) 3 wt.\*, wrt. total wt. of the structure of lower melting fibres comprising 80 wt.% LLDPE, and (2) 97 wt.% or less wrt. total wt. of the structure, of non-melting fibres or fibres (I) having a m.pt. higher than the LLDPE fibres. The difference in m.pt. between the fibres is 10 deg.C or more. USE - For the mfr. of yarns, (non)woven fabrics, carpets and laminates. ADVANTAGE - Improved dimensional stability, abrasion resistance and wear properties. Fibre (I) comprises 80 wt.% or more LLDPE having a m.pt. under 109 deg. C. Also claimed are a fibre structure and a thermally consolidated fibre structure. PREFERRED ALERT - The fibre structure comprises (I) and other fibres, in the form of a multifilament yarn woven textile fabric, knitted textile fabric, tufted textile fabric, nonwoven textile fabric or carpet. The thermally consolidated fibre structure comprises (1) 3 wt.%, wrt. total wt. of the structure of lower melting fibres comprising 80 wt.% LLDPE, and (2) 97 wt.% or less wrt. total wt. of the structure, of non-melting fibres or fibres (I) having a m.pt. higher than the LLDPE fibres. The difference in m.pt. between the fibres is 10 deg.C or more. USE - For the mfr. of yarns, (non)woven fabrics, carpets and laminates. ADVANTAGE - Improved dimensional stability, abrasion resistance and wear properties. Fibre (I) comprises 80 wt.% or more LLDPE having a m.pt. under 109 deg. C. Also claimed are a fibre structure and a thermally consolidated fibre structure. PREFERRED ALERT - The fibre structure comprises (I) and other fibres, in the form of a multifilament yarn woven textile fabric, knitted textile fabric, tufted textile fabric, nonwoven textile fabric or carpet. The thermally consolidated fibre structure comprises (1) 3 wt.%, wrt. total wt. of the structure of lower melting fibres comprising 80 wt.% LLDPE, and (2) 97 wt.% or less wrt. total wt. of the structure, of non-melting fibres or fibres (I) having a m.pt. higher than the LLDPE fibres. The difference in m.pt. between the fibres is 10 deg.C or more. USE - For the mfr. of yarns, (non)woven fabrics, carpets and laminates. ADVANTAGE - Improved dimensional stability, abrasion resistance and wear properties.

CHOSEN-DRAWING: Dwg. 0/0 Dwg. 0/0 Dwg. 0/0

TITLE-TERMS:

FIBRE STRUCTURE MANUFACTURE YARN FABRIC CARPET COMPRISE LINEAR LOW DENSITY POLYETHYLENE FIBRE IMPROVE DIMENSION STABILISED ABRASION RESISTANCE WEAR PROPERTIES